ATTITUDE OF UNDERGRADUATE MEDICAL STUDENTS TO PATIENT SAFETY

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ABSTRACT

Background: *To assess undergraduate medical students' attitudes to the patient safety issue and their interest in patient safety education.*

Method: *The cross-sectional survey of 519 undergraduate students was conducted at the Faculty of Medicine, Universitas Yarsi, in September 2017. A structured and anonymous self-administered questionnaire was handed to medical students, including preclinical and clinical undergraduate students.*

Results: *Overall, 308(59%) students agreed that medical errors were inevitable, but 391(75%) students thought competent physicians do not make errors. More than half of the students said medical errors should be reported even if there is no harm to the patient (59% and 73% respectively). Less than half (29%) students believe reporting systems do little to reduce future errors. Almost all of the students (94%) thought work harder and more careful is an effective strategy after an error occurs. Over 80% of students thought physicians routinely share information about medical errors. The majority agreed that patient safety should be part of medical curriculum and physician should spend their time to improve patient care (66% and 86% respectively). Most students (94%) would like to receive teaching on patient safety further.*

Conclusion: *This study revealed that undergraduate students had a positive attitude to patient safety and teaching of 'patient safety' needs to be promoted in the medical curriculum.*

Keywords: patient safety, medical error, curriculum, medical students

ABSTRAK

Tujuan: Tujuan penelitian untuk menilai sikap mahasiswa kedokteran terhadap keselamatan pasien dan minat mereka terhadap pendidikan keselamatan pasien.

Metode: Survei potong lintang dilakukan terhadap 519 mahasiswa fakultas kedokteran Universitas Yarsi pada September 2017. Sebuah kuesioner anonym dan terstruktur diberikan kepada mahasiswa kedokteran tahap pra klinik dan klinik.

Hasil: Secara keseluruhan, 308 (59%) mahasiswa setuju bahwa kesalahan medis tidak dapat dihindari, namun 391 (75%) mahasiswa berpikir dokter yang kompeten tidak akan membuat kesalahan. Lebih dari separuh mahasiswa mengatakan kesalahan medis harus dilaporkan bahkan jika tidak ada bahaya sekalipun pada pasien (masing-masing 59% dan 73%). Kurang dari setengah (29%) mahasiswa percaya sistem pelaporan dapat mengurangi kesalahan di masa depan. Hampir semua mahasiswa (94%) beranggapan bekerja lebih keras dan lebih berhati-hati adalah strategi yang efektif setelah terjadinya sebuah kesalahan. Lebih dari 80% mahasiswa mengira dokter secara rutin berbagi informasi tentang kesalahan medis. Mayoritas setuju bahwa keselamatan pasien harus menjadi bagian dari kurikulum kedokteran dan dokter harus menghabiskan waktu mereka untuk meningkatkan mutu perawatan pasien

(masing-masing 66% dan 86%). Sebagian besar mahasiswa (94%) ingin memperoleh pembelajaran lebih lanjut tentang keselamatan pasien.

Kesimpulan: Penelitian ini mengungkapkan bahwa mahasiswa kedokteran memiliki sikap positif terhadap keselamatan pasien dan pengajaran tentang keselamatan pasien perlu diterapkan dalam kurikulum kedokteran.

Kata Kunci: keselamatan pasien, medical error, kurikulum, mahasiswa kedokteran

INTRODUCTION

Patient safety is an important element of health care and can be defined as freedom for a patient of unnecessary harm or potential harm related to health care. Every year, a number of patients suffer injuries or die because of unsafe and poor quality health care. Most of these injuries are avoidable.[1]

The challenges to patient safety in health care are lack of safety culture and attitudes that overlook basic safety rules for both the patient and the healthcare professional. Healthcare professionals are reluctant to report or talk about adverse events and medical errors for fear of blaming, embarrassment, punishment. Moreover, there is underreporting of adverse events and medical error.[2]

The World Health Organization (WHO) has strategies for safer health care by placing the patient at the centre through developing guidelines and tools, and building capacity. The patient safety education program was established in 2009 to support the education and training of medical professionals and students in quality improvements and patient safety.[3]

Medical students are the future medical care providers. They need to understand how systems affect the quality and safety of health care and must prepare themselves to practice care safely. The World Health Organization (WHO) has developed a Patient Safety Curriculum Guide for medical students to help them meet this future challenge. The medical patient safety curriculum guide builds patient safety knowledge and capacity to practice safely.[4]

In Indonesia, curriculum on patient safety has implemented on 18 medical faculties since 2012 according to the WHO Standard.[1,5] Even tough, curriculum on patient safety for other healthcare professionals has not developed yet.[4] There were also a guide how to integrate patient safety into medical school curriculum. It will enable and encourage medical school to include patient safety in their course. However, very few studies have been investigated of undergraduate medical student attitude to patient safety. The purpose of this study was to assess undergraduate medical students' attitudes to patient safety issue and their interest in education related to patient safety.

METHOD

The cross-sectional survey was conducted at the Faculty of Medicine, Universitas Yarsi, in September 2017. A structured and anonymous self-administered questionnaire was handed to medical students including preclinical and clinical undergraduate students. The questionnaire having 15 items related to patient safety issues was adapted from one used in an earlier study.[6,7] Those who volunteered were included. No sample size calculation was done.

The first 4 items in the questionnaire were about students' perceptions about the causes of medical errors, the second 7 items were about management of medical error and the last 4 items addressed their views on inclusion of patient safety education in medical curriculum. Grading of responses was done using a 5-point ordinal scale where 1=strongly disagree and 5= strongly agree.

The main outcome measures were students' attitudes about patient safety issues and their attitude to the teaching of patient safety curriculum. Data was analysed using SPSS 20. Frequency and percentage was used to report categorical data. Chi-square was used to find out significant difference between the responses of different groups of students, with $p<0.05$ being significant.

RESULTS AND DISCUSSION

All 519 participants responded. For the purpose of reporting we combined the responses of 'agreed' and 'strongly agreed' to report them as 'agreed', while 'disagreed' and strongly disagreed' were together reported as 'disagreed'. In the following summary our findings, for ease of presentation, the term “majority” was defined as “greater than 50% of respondents”.

Items 1 to 4 were aimed at addressing students' knowledge regarding medical errors. Medical error is a complex issue, but error itself is an inevitable part of the patient condition. However, it can be avoided. To achieve this, medical students must learn from past errors, and learn how to prevent future errors.[8] Although majority of students were correct in thinking that medical errors are inevitable, about a quarter neutral with this and approximately 13% remained disagree. By giving the teaching of patient safety even in short lecture, the student awareness about inevitable of medical error will improve.[9] Half agreed that best care is not always provided to patients (263; 50.67%). The results were similar to the findings of Leung[9], Shah[10], and Nabilou[11]. Majority of students thought competent physicians do not make errors (391; 75.34%). For item 4, a significant number of students thought most errors are not related to physicians (249; 47.98%) and this misconception was more among preclinical students (212; 51.08%) than clinical students (37; 35.58%) (*p* value = 0.006).

The concerns of patient safety are worldwide, and it is widely recognized that medical errors, adverse events, and near miss events are considerably underreported. Items 5 to 8 were related to perceptions about reporting of medical errors (Table 1). It was encouraging that majority of students thought medical errors should be reported (306; 58.96%) and moreover they said there is need to report a near miss event (380; 73.22%) thus will have a chance to learn from those cases. Medical community may not want a doctor especially medical student to speak in view of the risk of litigation, and also to remain quiet and defend other doctors who make mistakes. By learn from error, student will realize that blaming people does not work, and that if people fear being blamed no one will report or learn from the event. Reporting incidents and adverse events is also a systematic way of gathering information about the safety and quality of care.[8,12]

Almost half number of students disagreed that only physicians can determine the causes of medical error (249; 47.98%). Medical error occur not because patients intentionally hurt by bad people but rather that the system of health care today is so complex that the successful treatment and outcome for each patient depends on many factors, not just the competence of physicians.

When so many people and different types of health-care providers (doctors, pharmacists, nurses, laboratory staffs and others) are involved this makes it very difficult to ensure safe care, unless the system of care is designed to facilitate timely and complete information and understanding by all the health professionals.[13,14]

More than one-third students thought reporting systems will reduce medical errors (205; 39.5%). An incident-reporting system is an important component of an organization's ability to learn from error. Most of health facilities e.g. hospitals will have a reporting system to identify adverse events. It is important that students are aware of these events. Students should seek information on the reporting system used in the hospital where they are practicing or placed. Students should be familiar with the system in place and seek information about how to report an incident.[15,16]

The vast majority agreed that errors can be prevented by working hard and being more careful (490; 94.41%). In contrary, evidence shows that the traditional "perfectibility" model which assumed that errors can be avoided by being careful enough and working hard can be dangerous as the major contributing factor for adverse events is the human.[17.18]

Near half said that uncertainty should not be tolerated in patient care and culture of medicine was supportive for dealing with errors (257; 49.52 %). Medical doctors need to understand the culture of their work situation, and how it impacts upon team functioning. Discussions about medical errors are difficult for doctors in all cultures. In some cultures and hospitals, openness about errors may be new and so it will be very difficult for doctors. In these cases, it may be appropriate for the students to discuss about errors in a student teaching session.[18,19]

About 80% agreed that physicians routinely share information about medical errors. The key to an effective reporting system is to have staff routinely reporting incidents or near misses. However, unless staff trust that the organization will use the information for improvement and not to blame individuals, they will not report. Trust includes the belief that the organization will also act upon the information. If a medical student reported an incident to a senior nurse or doctor who dismissed their effort and told them not to bother, then the student is less likely to make a report again. Even when this happens, students should be encouraged by faculty staff to continue to report. One day the student will be a senior doctor and their actions will be highly influential on younger doctors and students.[5,10]

The findings showed that preclinical students were more interested in learning patient safety than clinical students. They were also concerned that medical school was appropriate time to learn it. The vast majority agreed that physicians should routinely spend part of their professional time working to improve patient care. The WHO Patient Safety Curriculum Guide can serve as the standard guideline for developing a uniform patient safety curriculum. Furthermore, to make teaching of patient safety effective and fit for purpose, theory has to be linked to real practice by applying the human factor approach in order to have a positive impact on students' future clinical performance.[5]

The limitation of this study is that the data was self-reported there could be an element of recall bias. This patient safety education should begin as soon as students enter their first clinical rotation so that they can apply their new

knowledge and skills to real patients. Today's students will be tomorrow's healthcare professionals and it is imperative that we make them competent and safe for ourselves and our future generations.

CONCLUSION

This study revealed that undergraduate students had a positive attitude to patient safety. The teaching of 'patient safety' was highly supported by students and needs to be promoted in the medical curriculum.

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Table 1. Responses to items of the questionnaire on patient safety (n=519)

Item	Item question	Agree N (%)	Neutral N (%)	Disagree N (%)
1	Making errors in medicine is inevitable	**308(59.34)**	140(26.97)	71(13.68)
2	There is a gap between what physicians known as "best care" and what is being provided on a day to day basis	**263(50.67)**	163(31.41)	93(17.92)
3	Competent physicians do not make errors that lead to patient harm	**391(75.34)**	76(14.64)	52(10.02)
4	Most errors are due to things that physicians cannot do anything about	249(47.98)	129(24.86)	141(27.17)
5	If I saw a medical error, I would keep it to myself	72(13.87)	141(27.17)	**306(58.96)**
6	If there is no harm to a patient, there is no need to address an error	45(8.67)	94(18.11)	**380(73.22)**
7	Only physicians can determine the causes of a medical error	111(21.39)	159(30.64)	249(47.98)
8	Reporting systems do little to reduce future errors	154(29.67)	160(30.83)	205(39.50)
9	After an error occurs, an effective strategy is to work harder and to be more careful.	**490(94.41)**	21(4.05)	8(1.54)
10	Physicians should not tolerate uncertainty in patient care.	**257(49.52)**	182(35.07)	80(15.41)
11	The culture of medicine makes it easy for providers to deal constructively with errors	**257(49.52)**	224(43.16)	38(7.32)
12	Physicians routinely share information about medical errors and what caused them	**417(80.35)**	77(14.84)	25(4.82)
13	Learning how to improve patient safety is an appropriate use of time in medical school	**342(65.90)**	100(19.27)	77(14.84)
14	Physicians should routinely spend part of their professional time working to improve patient care	**449(86.51)**	66(12.72)	4(0.77)
15	I would like to receive further teaching on patient safety	**488(94.03)**	28(5.39)	3(0.58)

Table 2. Preclinical and clinical students' attitude to patient safety (n=519)

Item	Preclinical Students			Clinical Students			p value
	Agree N (%)	Neutral N (%)	Disagree N (%)	Agree N (%)	Neutral N (%)	Disagree N (%)	
1	249(60.00)	105(25.30)	61(14.70)	59(56.73)	35(33.65)	10(9.62)	0.144
2	204(49.16)	132(31.81)	79(19.04)	59(56.73)	31(29.81)	14(13.46)	0.288
3	317(76.39)	64(15.42)	34(8.19)	74(71.15)	12(11.54)	18(17.31)	0.018
4	212(51.08)	102(24.58)	101(24.34)	37(35.58)	27(25.96)	40(38.46)	0.006
5	54(13.01)	111(26.75)	250(60.24)	18(17.31)	30(28.85)	56(53.85)	0.403
6	33(7.95)	75(18.07)	307(73.98)	12(11.54)	19(18.27)	73(70.19)	0.497
7	82(19.76)	136(32.77)	197(47.47)	29(27.88)	23(22.12)	52(50.00)	0.056
8	119(28.67)	132(31.81)	164(39.52)	35(33.65)	28(26.92)	41(39.42)	0.512
9	393(94.70)	16(3.86)	6(1.45)	97(93.27)	5(4.81)	2(1.92)	0.570
10	203(48.92)	148(35.66)	64(15.42)	54(51.92)	34(32.69)	16(15.38)	0.835
11	202(48.67)	186(44.82)	27(6.51)	55(52.88)	38(36.54)	11(10.58)	0.174
12	341(82.17)	60(14.46)	14(3.37)	76(73.08)	17(16.35)	11(10.58)	0.007
13	282(67.95)	84(20.24)	49(11.81)	60(57.69)	16(15.38)	28(26.92)	0.001
14	362(87.23)	50(12.05)	3(0.72)	87(83.65)	16(15.38)	1(0.96)	0.340
15	400(96.39)	14(3.37)	1(0.24)	88(84.62)	14(13.46)	2(1.92)	0.000

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